



MEDICINAL DRINKING.

BY
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(LATE PHYSICIAN, EDINBURGH.)



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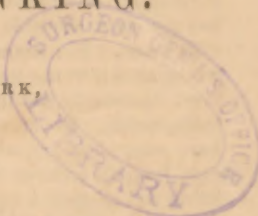
Late Physician, Edinburgh.

INTRODUCTORY.

WHAT is now generally understood as a "*movement*" among men depends for its permanent success on the *truth* which really underlies it. If there is only a small proportion of truth mixed with a great proportion of error, the "*movement*" will be to a great extent a failure—it will often be threatened with entire extinction—and it will be long in reaching any considerable or satisfactory result. If the proportion of truth is great, and that of error small, success in reaching a lasting and satisfactory issue will be more speedy, and the issue itself the greater. If there should be a great deal of truth, but that has entered only a few of the minds moving in favor of a great general object, while little or none of it has entered into the great majority of minds so moving, then the disastrous influence of the many may even extinguish the comparatively feeble influence of the few, so that the truth will be buried, at least for generations, amid the rubbish of error. If, on the other hand, the maximum of truth has taken hold on the majority of moving minds, the case will be different.

These principles will be found signally illustrated in the history of the temperance reformation. Error has mingled with truth from the commencement of this agitation down to the present hour. A great deal of truth has been discovered in connection with the movement—this large amount of truth has been known from nearly the commencement of the effort so strenuously made to put down alcoholic intemperance; but it has occupied the minds of only a small minority of those who have taken part in the work of reform. A vast amount of error has prevailed, and that has occupied by far the largest proportion of minds. To this hour, great numbers of so-called total abstainers not only look upon alcoholic liquor as good for man, but as the one only thing, in a great variety of circumstances, that can promote his health or save his life! The effect of this on the movement is most serious. A great many of the elements of failure that have again and again threatened the extinction of the agitation have been only the natural fruit of the false notions underlying the advocacy of the movement.

From this state of things, an imperative duty arises that must be discharged by some advocates, if the permanent triumph of the reformation



is to be secured. The amount of truth underlying the agitation must be increased as far as possible, and the amount of error lessened. That truth must also be brought into a greater number of minds, and made to displace those mischievous errors that now possess them. No intelligent mind can fail to see the necessity for both of these efforts—the one that of digging in the mine of knowledge to find more on our great subject than has yet been acquired, and the other that of distributing the treasure thus found. The second of these efforts almost necessarily subjects him who makes it to the less desirable notice of many of his fellow-men. He must necessarily disturb existing notions that have been stereotyped as indisputable. He must unmask snug refuges into which large classes have escaped, and in which they have learned to regard themselves as secure from all unfavorable inquiry or remark. He must even disturb existing and cherished interests that have been regarded as protected by the temperance movement as it has been, but as it can not continue to be, if its success is to be secured. But the work must be done, be the consequences what they may.

It is in view of this duty that I have undertaken to add a serious page or two to what has been already nobly written, especially by Dr. F. R. Lees, that prince of temperance authors, on the subject of *medicinal drinking*. Feeling confident that the current of truth already known may be at least more clearly presented by means of another effort for the purpose, and that this truth may be made to enter a great number of minds who are strangers to it now, I crave, humbly, but very earnestly, the reader's attention to a brief examination of the subject. Only remember that thousands on thousands are passing through this fleeting life in incalculable misery, and hastening to a dark eternity, whose dreadful case calls for our most urgent energies to save them.

In this chapter, I can scarcely do more than indicate the course which I mean to pursue in seeking to urge forward an essential element of our great reformation. I shall rather clearly indicate the great outlines of the argument by which the delusive character of medicinal drinking may be made clear, giving chiefly the *results* of a carefully considered investigation of the minutest details of the subject as I have studied them now for many years. The tremendous efficiency of the present system of medicinal drinking in hindering and enervating the whole temperance movement must come under consideration. The relation in which the great Creator stands to the imagined necessity of alcoholic liquor as a means of health, and of saving the life of man in his most critical moments, must be pondered. The question whether He has made one of the most ruinous drugs that ever was invented by man to occupy the place of the very water of life itself to the human race must be answered. Then we must sift the physiological ideas and facts that are entertained and acted on in medical and private practice in the system of medicinal drinking. Does alcohol so affect the food in the stomach—does it so affect the respiratory change in the lungs—does it so raise the animal heat—does it so mingle with the blood—does it so give vital force to the living organism—is its effect on the *feelings* of such a nature—that the truly scientific medical man will

order its use, or the truly wise patient take it when it is ordered? These questions are sufficient to open up a deeply interesting field of discussion. Their answers will, no doubt, be keenly canvassed by true temperance men. Perhaps these answers may be controverted, both by medical men and others. I anticipate multiplied objections to that which it will be necessary to advance; but as the good of men, by the sterling instrumentality of truth, is my great object, it will only give me sincere pleasure to have every thing thoroughly sifted. Perhaps I ought to anticipate a considerable amount of ridicule, and even worse, as the consequence of advancing that which necessarily reflects so unfavorably on many who claim to be leading lights of the time, and which also reflects so unfavorably on the imagined experience of those who are not easily persuaded that they may even possibly be wrong. But come what may for a season, the truth will not fail in the end. Most confident do I feel that all that can be calmly and justly said will only go the more fully to prove the delusive nature of medicinal drinking.

THE MEDICINAL SNARE.

ANY one who has been acquainted with the temperance movement for the last fifteen or twenty years must have had strong reason to remark at least three things in connection with the drinking of alcoholic liquors prescribed by medical men, or taken without such prescriptions, as medicines. The first of these has affected the advocates of temperance, or, as it is generally called, "*total abstinence*" from all such liquor. An astonishing number of those who were known widely as zealous lecturers in the movement have mysteriously disappeared from the platform, and have as mysteriously ceased to advocate the cause from the pulpit. When we have inquired after them, we have learned that they were taking liquor by "medical advice," and consequently had ceased to call upon their fellow-men to abstain. Others, again, have not quite ceased to have their names on the temperance list, and have even occasionally given an address in favor of abstinence; but from their being foremost on all proper occasions, and bold and outspoken in defense of the great cause, they have become shy of the platform, and have come to speak with bated breath against drinking. On inquiry into the cause of the change, we have again learned that liquor was being taken by "medical advice," or in a "purely medicinal way." Then, in following in the wake of lecturers and others, who have been visiting different places, it has been found that their influence has been worse than neutralized by its oozing out from the hotels or private houses in which they had lodged that they had taken liquor themselves after their abstinence labors. They had taken it "medicinally." It has even appeared that, "like other men," they had taken off their glass of liquor when "calling" at the house of a "moderate-drinking" friend. On inquiry, it turned out that the call happened to be made, and the liquor presented, just at the moment when the "medical adviser" had "ordered" the "medicine" to be taken. All this, and much of a similar nature, springing from the

same source, has proved not only ruinous to the influence of these men, but disastrous to the movement with which the men are identified.

Another sphere in which this evil claims our serious attention is found not among the public advocates, but among the private representatives of the movement. These consist of the office-bearers and members of total abstinence societies. They do not so widely affect the character and force of the movement, but they affect the progress of the cause more powerfully and seriously within the more limited circle to which their influence is confined. The profession of total abstinence calls the attention of his neighbors to every one who makes that profession. If he not only signs the pledge, and attends the temperance meeting, but exerts himself to induce others to do the same, he becomes, of necessity, a marked man. Those around him who cling more or less to the drinking customs feel, in some degree, a disagreeable effect produced upon them in their indulgence, by the very fact of his being in their neighborhood. They are ashamed and troubled, or have to summon up unusual hardihood if they drink in his presence. All this fixes attention upon him in a way that is not likely to let any opportunity escape of curtailing or extinguishing his influence. If a medical adviser prescribes liquor to such a man, he, or some of his, must go to the liquor-shop for it. The matter soon becomes known. It is, in fact, a real triumph to the liquor-dealer to sell drink for such a patient. If it be right for any one, in any circumstances, to buy the liquor, and, moreover, if it be the sheet-anchor which alone can be relied on in the hour of distress, instead of its being wrong and disreputable to sell it, he who does so is a benefactor, so far, of his kind. Every spirit-dealer feels that he is thoroughly victorious over the "abstainer," so called, who resorts to liquor in his day of weakness. It would be preposterous to think of his concealing his triumph. Why should he do so? If all the ill that is said against his business is, after all, so false that he is the physician's "right-hand man" at the most critical moment of life, why should he not make the facts which prove this as widely known as possible? And so the "medicinal" drinking of the teetotaler becomes the subject of general remark, and he and his whole movement are ridiculed and despised. We know instances in which abstainers have deliberately told their medical advisers that they would much rather die than that such a destruction of their good influence should take place. No one who is thoroughly impressed with the immense importance of the movement can wonder at their decision.

The third, and certainly the most deeply affecting aspect of that which constrains our dealing earnestly with our present subject is that presented by the tremendous effects of temptation, arising from medically prescribed liquor. That which strikes the merely superficial observer is not the worst in this view of the evil—I mean the drawing back into intemperance of those who had been for a season reclaimed. There is a vast field among these, in which prescribed liquor has wrought, and is still working, heart-rending results. Indeed, in almost every deplorable case of failure which occurs with those who seemed to be redeemed, the original occasion of the failure has been provided, either by a medical adviser, or on the medical idea that liquor was wanted on account of defective health.

But the cases in which intemperance is commenced by the medicinal use of liquor are far more numerous and dreadful than those in which it is revived. It ought never to be forgotten, that the very same thing which carries back one who has been intemperate, and has escaped from the snare, coils around the fresh victim those bands of infernal power from which comparatively few escape, even for a time. In a number of cases that ought long ere now to have horrified society, and driven alcoholic "medicines" from among us, the medical adviser is the real tempter by whom the career of the drunkard is commenced. We have no doubt whatever that he is unconsciously that tempter; but (when we know what means of knowledge medical men have within their reach) we can not but think they are culpable in giving that advice which proves so ruinous. Scores of cases of men, and still greater numbers of cases of women, might be given, in which the miserable lives, the miserable families, the miserable eternities of poor drunkards, may all be set correctly down to medicinal drinking, as that which occasioned the entire evil. It is surely, then, incumbent on all who take any interest in the temporal or eternal welfare of their fellow-creatures, to make sure work with this mischievous system. If it is found, on careful examination, that all medical men who "prescribe" and "order" alcoholic drinks are proceeding in such a practice on one of those delusions that are followed and abandoned, as so many things are, by "the faculty," nothing can be more desirable than that the dream should be as speedily as possible dispelled.

A PRELIMINARY ARGUMENT.

IF we take the present practice of the great majority of medical advisers as our guide, we must come to the conclusion that there is nothing nearly so essential to man, in his time of greatest need, as alcoholic liquor. Among the almost endless list of materials which have been collected, and from which they may choose when prescribing for the relief of suffering human beings, there is nothing that is at all to be compared with this drug. When the question is asked, if *nothing* else can be given as a substitute, the reply is, "*Nothing*." The temperance reformer is again and again found in a situation of humiliating defeat and inconsistency on this account. He has for half a life-time labored to prove that alcohol is ruinous to the body and soul of man—that it is evil, and only evil. At length he, or some one of his family, is brought to the brink of the grave. He has perhaps a temperance medical man as his family physician, or he calls one of the best that can be found. What is to be done? The patient must have alcohol! Will nothing else do equally well? "*Nothing*!" So the total abstainer succumbs, and leans on that as the only ground of hope for life, which he has so long spoken of as "that accursed liquor!" Let any one just calmly think over the real state of the case as it stands in this country, and he will find it impossible to avoid one of two conclusions—either alcoholic liquor is the one thing in existence, above all others, important to man in his greatest need, or medi-

cal prescription, in this point, is a delusion, and society, in this land of light, is in a state of delusion on the subject.

We proceed, then, to assert, and to give strong reasons for the assertion, that medical men are all but universally deluded in this matter. The best of themselves, and the most distinguished, will be the last to question the possibility of our assertion being true. They all know that the universal blood-letting of Italy is a murderous delusion. They know, also that many things practiced as universally in this country as the use of alcohol is now have been discarded as delusions by all well-informed medical men. The use of this very drug in cases in which it has been "poured into" patients, as that by which alone they could live is now demonstrated by medical writers of the very highest standing to be little less than murder. We shall see the facts which prove this statement by and by. Medical authors are the most bewildered of all writers. Confessedly they live and labor in the dark. So do physicians in their practice. A friend of ours was told lately by one of the first physicians in London that she must have wine, and, at the same visit to the great medical men of the metropolis, by another of equal standing that she must by no means taste any thing of the kind! They run right against one another in many cases on this same point of practice. I know a case, for example, in which a gentleman called on one of the first physicians in Britain. At the time, this physician was from home, and one of somewhat equal mark was attending to his patients. This highly qualified substitute "ordered" the patient to abstain sacredly from liquor, if he wished to have the least hope of a cure. The gentleman called back when the other physician came home. *He* ordered him six glasses of brandy a day! Cases far more flagrant might be adduced in hundreds. In one that came to my knowledge, about two years since, a gentleman was recovering slowly from a dangerous illness, under the care of a medical adviser who would allow no liquor of this nature whatever. He imagined he might get better advice, and get round more rapidly. He called in two other medical men. They gave him five bottles of whisky in as many days, and on the sixth he was lifeless. His death was according to professional rules, and so "all right!" There were "no reflections." It is not easy to refrain from saying what one thinks of such a removal from this world, though the law says it is just as it ought to be! No man who is willing to know the truth and who has sufficient manliness to think for himself at all, can doubt that there are strong indications of the medical profession, as a whole, being in gross darkness on this point of alcoholic prescription, or that the whole thing is remarkably like a popular delusion. We may assuredly go a step further than to believe in the bare *possibility* of its being so. By and by we shall all be compelled to go a step further than even the strong *probability* of its being so. *It is so.*

Those with whom we care most to argue on this subject believe in God. They believe that if alcoholic liquor *is* so essential to human weal, as the currant practice of medical men would indicate, God has made it thus essential. Is there not some reason, then, to doubt that He would make that the very elixir of life, to save, or help, when nothing else can, which is known to be the most dangerous thing in existence for many human be-

ings even to taste? No man, who knows the effects of this liquor, as they are now in thousands of cases existing, can possibly doubt that multitudes had better have died a hundred deaths than been ensnared as they have been by means of it. The young American soldier who, when exhausted and shivering, was presented by his officer with a glass of wine, was right when he said, "No, sir, thank you; I would rather face all the cannon of the enemy than take that liquor." He knew it would raise again the demon that had possessed him. Hundreds on hundreds of the most horrid cases prove that nothing on earth is so fatal as this is—not in what is looked upon as excess, but in the first small quantities that create the thirst of the drunkard; and our all-important question is this, *Can it be that God has made such a drug essential to human well-being, so that to save or to aid life, in our greatest need, nothing can do so well?*

Put a case fairly before your mind. Here is a young man we once knew. To all appearance he was a Christian. He gave every evidence of being a first-rate business man, and succeeded, as the best of his friends could wish, in establishing himself in the world. He married a young Christian woman every way worthy of him. They went on, in all respects, well, till he was taken seriously ill. At a particular stage of his illness, and when the worst was probably over, his medical attendant prescribed *wine*. That liquor quickly created in him the peculiar liking of the drunkard. He rose from his sick-bed possessed by a malady ten thousand times worse than that which laid him down. *Dipsomania*, or drink-madness, was fairly fastened on him. He was not long in breaking his young wife's heart, and she died. He was wrecked in business, and the last time I heard of him he was a haggard outcast, wandering he knew not where. Can my reader believe that God has made that liquor, which brings about thousands of such woes, the one thing needful in such a case as this? Was it God's own law that the physician was following when he ordered that fatal drink? By what process of reasoning can you reconcile Jehovah's character with such a law? It requires the ingenuity of man, and that exerted in no small degree, to change the God-provided materials of human sustenance and comfort into the dangerous compounds we are now considering. No one whose mind is informed on the subject can regard alcohol as a product of nature, properly speaking, or as a creature of God. No man who knows his Bible and its true teachings will for a moment hold that the wine spoken of with favor there is alcoholic liquor. God has made the wine "in the cluster," in which there is "a blessing," and he has consistently recommended that in his word. But that man-ruined liquor, which "is a mocker," he has neither made nor recommended. Does it not, then, seem possible, probable, nay certain, that the prescription and use of this most mischievous agent, as it is now used medicinally, is only a delusion and a snare, from which men will be delivered just as soon as they are prepared to follow the light of truth and the teaching of the Eternal? Such thoughts and questions will at least suitably prepare our minds to look somewhat carefully into those facts that, in our view, demonstrate the delusiveness of medicinal drinking.

ALCOHOL AND DIGESTION.

IN entering on what may be regarded as the strictly medical region of this inquiry, I am reminded of what was once said to me in rather peculiar circumstances. Coming from Glasgow in a railway carriage one evening, three card-sharpers got into the compartment in which I was sitting. Being Edinburgh men, they knew me, and did not ask me to take any part in the game which one of them soon urged upon a stranger who was sitting opposite me. Another of the gang was at my side. When I saw that the stranger was about to be deceived, I put my foot quietly on his, and pressed slightly. His face colored in a moment, and the sharpers saw their chance was gone. The one nearest then turned to me, and, with a remarkable air of injured innocence, said, "I'm sure we never meddle with your profession, and you ought to let ours alone!" I am as far as possible from insinuating that our excellent medical men are on a footing with card-sharpers, but I do find that some of them take very much the same attitude as this rascal did with me in the train. They resent encroachment on professional ground. I would, therefore, say to all such, that I cheerfully give every M. D. in the world the freest possible leave to analyze any thing I have either said or written as a preacher of the Gospel, while I claim the right, which I thus concede, to analyze especially what I find to be their terribly fatal prescription of alcoholic drink. These are days in which all things must bear to be sifted, if they are to continue to claim the confidence of men.

In the order which I am disposed to follow, we come, first, to digestion. Especially in the matter of support, it is essential to our inquiry to examine fully into alcoholic influence on the change by which food introduced into the stomach becomes capable of passing into the circulation and constituent elements of the living frame. It may be best to suppose a case for illustration. Here, then, is a child of, say, six or seven years of age. This child is of the slenderer sex, and has been brought into a state of extreme weakness as the consequence of fever. The fury of the disease is expended, but it has as nearly as may be extinguished life. The medical man's one hope for saving this child is now concentrated in what he fancies to be "support." Beef-tea, arrowroot, and *port wine* are prescribed. Let it be kept in mind that the pure wine of the grape is discarded in favor of alcoholic wine. Our question is, What effect will the alcohol in this wine have on that process by which the food is to prove really nourishing, and so to be that support which is the only hope for this child? Will it help her? or will it so hinder the necessary change in the food as to kill her, unless she has sufficient strength left to get above its influence? These are surely important questions. Neither of them can be set at rest by the fact that she recovers; for she *may* have strength enough, as many have had, to survive even a serious error in her treatment.

What light, then, does true science throw on these important questions? All who know any thing on the subject are aware that alcohol, instead of dissolving *food*, or aiding in its dissolution, is one of the most powerful agents in preventing that dissolution. On what principle, then, is it pos-

able that its being mixed with the materials of food, in this case, can aid in their dissolution, so that they may more easily be changed into the fresh blood required to sustain and recover life in this child?

If an experiment like the following is tried, it will throw great difficulty in the way of the physician's explanation: Take two glass vials, and fill them both with the gastric juice in which all food is dissolved in the stomach of the animal human. Place a small piece of meat in each of the vials. Pour in a very small quantity of alcohol into the one, and put none in the other. Heat both then up to the temperature of the blood in a living person. The meat in the vial in which there is no alcohol will begin speedily to dissolve, and go on dissolving till it is all manifestly in a state fit to pass from the stomach into the circulation of the body. That in the vial into which the alcohol was introduced will remain unchanged, or, if much alcohol has been introduced, it will be hardened, and brought into a state for permanent preservation. Here, then, is indisputable evidence that alcohol effectually *prevents* that process which is known as digestion, and which is essential to food's being of any use to support life in man. On what principle can the physician explain his introduction of it into the stomach of a child whose thread of life is attenuated to the slenderest hair?

Some one will perhaps say, "Ah! but there is a great difference between a glass vial and the stomach of a human being." And what difference is there that can help the case? There is no difference between the one vial in the experiment and the other, yet the food dissolves in the one that has no alcohol, and hardens in that which has. There is one important difference between the vial and the stomach, but it does not help the physician or his system, though it sometimes saves his patient. The alcohol, *ventilates* in the vial; after a time, it passes from the stomach of the child. But our question is with its effect while it is present in the gastric juice, not with the effect of its being thrown off at great expense of strength, so that it fails to destroy life. What difference can there be between the chemical effect of a mixture of alcohol with food and gastric juice at the same temperature in the stomach and in the vial? It becomes the advocate of the prescription to point out that difference.

The reader will carefully keep in view that I am here taking but one step in my argument. All I ask at present is, What effect alcohol in the stomach has on the dissolution of the food, or on its chemical preparation to enter into the circulation of the body, so as to nourish the actual strength of the human being to whom it is given? We shall come afterward to deal with men that look back, on this point, and demonstrate that alcohol hinders the life process from its commencement in the stomach to its close in the passing off of the waste of the system. At present, we urge the chemical truth that *raw alcohol*, given to promote support, is of such a nature as to prevent that which would nourish from effecting the end so much to be desired, and for which true food is adapted.

There is another experiment which throws light on this subject of the relation of alcohol to digestion. If in a healthy and somewhat hungry state, when the saliva is at its best for mingling with the masticated food, so as to

promote digestion, you touch a piece of litmus paper with the tongue, it will *red*den at the spot at which you touched it. If you take a small quantity of alcoholic liquor, and then touch the same paper, it becomes *green*. The chemical character of the saliva has been essentially changed by the action of the alcohol, and it is now incapable, for the time, of performing its natural part in digestion, or in turning the food into the substance of which blood is formed. In the exhausted child, whose case we have supposed, all the organs of secretion are at their lowest ebb of power. The saliva has, like all the other juices, its *minimum* of dissolving efficacy. On what principle, then, is alcohol introduced to neutralize what little of that efficacy remains?

Our reasoning is only yet in its earlier stages, and we are well enough aware how the loose thinker will leap off to objections which are not yet met in the argument. The careful and logical reasoner will face the facts actually before him. He will deal with them so far as they go. He will set them scientifically aside, or give in to the conclusions they involve. He will admit, and must admit, that alcohol introduced into the stomach of the human being arrests that process of change in the food which we call digestion, and consequently prevents the conversion of that food into those substances that enter into the composition of the blood and body, supporting human life. In *this* matter, at least, he will be compelled to believe that medicinal drinking is a delusion. The patient we have supposed represents but one of many thousands, vast numbers of whom have died, though we speak of this one as having recovered. Our argument applies, in all its force, to every case in which alcoholic liquor is used for the support of life, in the way of aiding the ordinary organs, or processes furnishing that support. The truth it teaches proves most thoroughly the error of all such medicinal drinking.

EVIDENCE OF THE BREATH.



FROM the consideration of digestion, as supplying the means of support to life, it seems well to pass to the examination of some such indication of the degree of intensity in the life process itself as infallibly shows when that process is really accelerated and when it is retarded. This is found very decidedly in the chemical composition of the breath. The common air which we inhale, in breathing, is composed chiefly of two gases—oxygen and nitrogen. It is for the sake of the oxygen especially, or almost exclusively, that the respiratory process is carried on. When we draw in a breath, the common air of the atmosphere passes into the cells of the lungs; there it meets the dark venous blood that has come into these cells for the purpose of undergoing a chemical change. The membrane, on one side of which is the air, and on the other the blood, is so thin, that the oxygen of the air and the carbon of the blood combine with each other through it. The blood takes up a portion of the oxygen and goes back into the body fitted by its means to nourish the material frame, and carry on all the processes essential to life: at the

same time the breath taking up a portion of the carbon of the blood is changed so as to be, in a considerable measure, composed of carbonic acid, and then it is sent out into the atmosphere. The result of the breathing process is, that the blood receives oxygen, and the breath carbon. That which is a most essential element of animal life goes into the circulation, and that which damps, and (if in sufficient quantity) extinguishes life, goes off into the air. Any ordinary mind can at once see that the amount of oxygen given to the blood, and the amount of carbonic acid given to the air, are the measures of the intensity of the life process in the case of every living being living on the principle of animal existence in man. If, on the one hand, the amount of oxygen is, by any means, lessened in the blood, and the amount of carbonic acid lessened in the breath, by so much is the life process certainly retarded. If, again, by any means, the amount of oxygen in the blood is increased, and also the amount of carbonic acid in the breath, the life process is just so much accelerated. Nothing can be more clear. "Support," which is not delusive, will show that it increases the intensity of the life process by increasing the oxygen in the blood, and the carbonic acid in the breath expired by the individual to whom it is applied.

We find that this reasoning is borne out by experiment. Take, for instance, the effect of moderate exercise, and that of fatigue. It is a law of our physical nature that exercise, up to a certain point, increases the life and vigor of whatever is exercised in the human body or mind. Beyond a certain point, exercise weakens, produces fatigue, and, if carried far enough, destroys life. Now, it is found, as settled fact, that such moderate exercise as promotes all healthful processes in the body increases the amount of oxygen in the blood, and also the amount of carbonic acid in the breath expired. It is just as certainly found that fatigue, or such exercise as depresses life, lessens both the oxygen in the blood and the carbonic acid in the expired air. This is perfectly established matter of fact, and will be disputed by none who are in any degree concerned for their reputation as ordinarily informed men.

There is a confirmatory fact in the effect produced on this life process and its results by the varying states of the mind. When any one is cheered, and the happiest flow of feeling is in full tide in the soul, if that has been produced by wholesome truth, or other innocuous means, the amount of oxygen in the blood is increased, and also the amount of carbonic acid in the breath that is expired. If, on the other hand, grief, or despondency, or other lassaing feelings are weighing down the spirit, the amount of oxygen in the blood, and of carbonic acid in the expired breath, is lessened in a perceptible degree. It is in accordance with this that all medical men endeavor to "keep up the spirits" of their patients, as they prescribe exercise when that is possible. Their object rightly is to increase the intensity of the life process, so as to get diseased and decayed matters removed, and the amount of healthful effect every way increased in the animal frame.

Now, what is the effect of alcohol on the breath when administered to man? It is at once that of a *diminished* amount of oxygen in the blood,

and of carbonic acid in the breath expired. This truth will be disputed by no one who knows any thing of the history of organic chemistry. You will see how it corresponds with the arresting of digestion when alcohol is introduced among the juices of the gastric system. How, then, will the medical adviser explain his attempt to "support" life in an exhausted and sinking patient by "ordering" a drug that never fails to bring out such serious indications of its tendency to depress the living powers? In what way will he reconcile the facts that can not be disputed, with his theory and practice of life "support"? There is the food preserved in the stomach, and there is the vital change of the air in the lungs, indisputably retarded by the one only agent to which he flees constantly for an increase of vital power. Must there not be something wrong? Is it not high time, even on health grounds, not to speak of moral reasons, that we should insist on the answer to such a question, and so insist as to compel the right answer?

Some highly respectable medical men display great lack of true science in the grounds they give for the use of alcohol. For example, a solitary symptom is taken and explained so as to favor the administration of alcohol in defiance of the teachings of all other symptoms testifying against the explanation. A medical adviser puts his finger on the pulse of a patient. It is weak and irregular. He orders a dose of alcohol, in one form or another. The pulse becomes regular and strong. So he argues triumphantly that the sufferer has got benefit. But he argues in oblivion of the symptoms of retarded digestion, of diminished carbonic acid in the breath, and, as we shall see, of diminished heat in the body, diminished sensibility in all the organs. It should never be forgotten that the heart's action becomes regular and strong when mortification has fairly set in on the dying patient. We have watched the pulse of a friend for days, and found it little else than an indication of a sort of gurgling stream passing through a heart that seemed to have lost all power to beat in the usual way; but as soon as the limbs were fairly dead, and the more remote parts had ceased to have any circulation, the heart's stroke became full and regular. Its work was now easy, as it had only a very limited circle through which to force the vital stream. Alcohol *kills* for the time a portion of the system, and loosens the heart's action just as mortification loosens it. What should we think of the medical man who should say that the death of the extremities is "support," or "stimulus," and seek to prove his assertion by the improved pulse when mortification has set in? And yet his reasoning would be just as good as that of him who gives the improved pulse as proof of the supporting nature of this vile liquor. In many cases the improved pulse is only the precursor of the ceasing of pulsation in death, that issue having been hastened by the alcoholic poison given; but those giving it are totally oblivious to what they have done, and since it is in the highest degree orthodox thus to administer a life-shortening drug, all is right! Great reflections would have been suffered had that drug been withheld! So would great reflections have haunted Count Cavour's relatives, if he had not been bled to death!

Ponder the facts, my reader, and you will find it difficult, even if willing,

to stand by the delusion of medicinal drinking. One of the first medical men of the day has said that it is doubtful if alcohol is a stimulant at all. Truth will by and by prevail.

ALCOHOL AND HEAT.

IT is right that we should try the use of alcoholic liquor as a medicine, or as a supporter of life, in every possible way. We have seen how signally it fails in the matter of digestion, and also in that of increasing the vital process, as indicated by the oxygen of the blood and the carbonic acid of the breath. We come now to the powerfully testing question as to whether it really increases or diminishes the animal heat on which life so indisputably depends.

Up to a very recent date, it has been one of the most generally received theories acted on by medical men, that alcohol is a substance capable of supplying fuel to the circulating life-system, and so giving heat, from its combining with the oxygen inhaled in the breath. False analogy has had a great share in producing and sustaining this theory. The ordinary spirit lamp has been regarded as identical with the lamp of life in the animal frame. When a quantity of alcohol (spirits of wine) is put into the spirit-lamp, and a lighted match applied, the carbon of the alcohol combines with the oxygen of the atmosphere, and heat is evolved. So, it has been imagined, when alcohol is introduced into the stomach, it enters the blood without waiting for any process of digestion, passes very quickly through the whole circulating system, combining with the oxygen of the blood, and giving heat and life to the body. It was known that alcohol does enter the blood, and that it speedily pervades the whole body. It was known that it produces a feeling like that produced by an increase of heat in the whole frame. So it was *concluded* that it really got into a state of combustion in the blood, somewhat as it does in the spirit-lamp, or in any other place, when a lighted match is applied to it. The match all the time was wanting except in certain cases that tell in a very serious way on the subject, but the imagination supplied the lack, and fanned the fire. The whole process of alcoholic combustion with the oxygen of the blood was so clear to the medical mind that it seemed vain for any one to dispute its reality.

The cases in which identity with the combustion in the spirit lamp is found in the body of the human being are very instructive. When any one has become saturated with alcohol, so that it streams from the breath, and pervades the whole body, if flame is brought near the mouth and nostrils the alcohol is kindled, and if not very speedily extinguished, the person is burned internally to death. The alcohol, in this case, enters into combustion with all the oxygen within its reach, and heat beyond all mistake is evolved. But the combustion destroys life, instead of sustaining or aiding it.

A witness, in whose testimony we can place the most perfect confidence, saw a young man who had been drinking for some time lift a lighted

paper to his tobacco-pipe which he held in his mouth, and instantly a stream of blue flame rushed from his lips and nostrils. A person standing beside him quickly extinguished the flame with her hand, or his life would, in all probability, have been lost, as the consequence of his combustion. Here was a case of true analogy with the fire and heat of the spirit-lamp, and, if the medical world had sought truly, it would, we believe, have found that this fatal combustion is the only one of alcohol possible in the animal system.

There are all the conditions of the spirit lamp in this burning, and so there is the combustion and resulting heat; but it is very different indeed in the case of alcohol mingled with the blood, and remaining, as it does, in any similar mixture, at a similar temperature, unchanged in all its own constituent elements and proportions. All the difference was overlooked, and a theory adopted and acted on by the highest medical authorities which had not an atom of truth to support it. There was, no doubt, the *feeling of warmth*, resulting from the administration of the drug; but if *feelings* are to be taken as true indications of *facts*, and interpreted as proving the reality of that which is *felt*, then all possible delusions must be believed. We shall have more of this afterward.

This theory of the combination of alcohol with the oxygen of the blood, so as to give heat to the body and support life, is now exploded. No chemist could risk his reputation on it for an hour; but it is wonderful how it could possibly have ever had the slightest hold on really scientific men. If any one, when quite free from alcohol, will note the degree of heat in his breath, or in his blood, by placing the bulb of a thermometer in the current of his breath, or under his tongue, and then, after taking a small quantity of any alcohol liquor, ascertain for some hours the temperature of breath and blood, by continued applications of the instrument, he will find that the heat is *lessened* as long as the spirit continues to influence the vital stream. One glass of brandy will keep it going down for above four hours. Of course we admit the *feeling* of heat, but the thermometer knows nothing of *feelings*. We should like to see the chemist who will openly prefer the thermometer of feeling to Fahrenheit! The thermometer of mercury, or of alcohol itself, declares that the degree of heat in the body is *lessened* seriously by the introduction of this liquor into the stomach.

We must here again combine the facts we have been considering. The digestion of the proper food, or fuel, in the stomach is hindered, and, in fact, arrested, by the introduction of alcohol. The carbonic acid given off by the expired breath is lessened. These two unquestionable indicators of the lessening of intensity in the life process are accompanied by the *falling* of the thermometer when applied to ascertain the amount of natural heat maintained in the body. All this is the effect of taking what is given in the most critical circumstances to support life! Is it not only too evident that, if the patient survive this mode of treatment, it is because he has an amount of vital energy remaining, sufficient not only for recovery if let alone, but sufficient to overcome the depressing influence of the mistaken treatment to which he has been subjected?

Here it may be well to notice the delusive nature of the system in which cases of recovery under the use of alcohol are paraded, when cases of death under its use are conveniently forgotten. Last year Dr. Gairdner, of Glasgow, no mean medical authority, placed some facts of very great importance before the world. We can not give them in any thing approaching their full extent, within our narrow compass, even in their results; but one specimen will indicate the nature of their teachings. Speaking of the cases of young persons afflicted with typhus fever, and treated altogether without alcohol, he states that out of 189 cases, only one died, and that one was in a dying state when admitted to the hospital. If those cases had been treated with a small amount of alcohol, as practiced in Glasgow in the years 1861 and 1862, he shows that "*six or seven*" would have died. Had they received the greater amount of alcohol given in Glasgow in 1847, *nine* would have died. Had they received the still larger amount of this poisonous liquor given in the London hospital, "*nearly twelve*" would have died. Had they been in the hands of Dr. Todd, "who advocated alcohol in typhus in the highest degree," Dr. Gairdner shows that not less than "*thirty to thirty-five*" of them would have gone to their graves! This is a fair specimen of Dr. Gairdner's carefully and far too cautiously stated results, as demonstrated in his tables of statistics and his reasoning on them. Instead of really *no* deaths among 188 patients treated without alcohol altogether, you have at least *thirty* young persons sent into eternity by its use! Dr. Gairdner argues only against "*excess*" in the employment of this drug, but the facts on which he argues are strong proof against its employment at all. People "*pour in brandy*" into the helpless patient to save life, while indisputable facts prove that they hereby secure his speedier decease! How often have we wished, with all the earnestness of which we are capable, that poor suffering humanity were rid of this miserable delusion. Experience has taught us how blessed the deliverance would be. I, myself, passed through a severe fever without either food, or drug, or drink of any kind but water. For seven days and seven nights nothing but water, and the juice of about half an orange, crossed my lips. Night and day, about every three hours, I was packed in sheets wrung out of cold water, this alone subduing the delirium constantly threatening to come on at the end of every two and a half hours. On the afternoon of the eighth day I got relief in perspiration, and was sufficiently strong that night to sit up long enough to shave. It took about six weeks to regain sufficient strength to enable me to resume my public labors, showing how severe the ordeal had been. But what a certificate in favor of "*pale ale*," or "*lager beer*," or "*port wine*," would such a case as that be! All cases quoted, in the loose way in which they usually are, prove nothing. Large averages of cases, no doubt, prove much, such as when armies pass through severe hardships with or without liquor—or crews in arctic regions pass the winter in the use of it, or discontinue it. All such averages are found in perfect harmony with the scientifically ascertained facts. All prove that this drug diminishes man's conditions, or so-called chances of life, and never increases them. All agree, like the fact of lessened heat to which I have just drawn your attention, to prove the delusive character of medicinal drinking.

RECENT DISCOVERIES.

WE have now considered three important points of truth as to the effect of alcohol on the process of life in the body of man. The effect of the drug, as we have seen, is to *preserve* the food from the action of the digesting juices in the stomach, to *lessen* the amount of used-up matter passing off in the breath, and to *reduce* the vital heat of the living frame. All this could be gathered from experiments and experience occurring long before the present time. *Ascertained facts* (separated from conjectures and theories on the subject, and carefully considered in their combined meaning) have been now, for a good many years, sufficient to prove that the system of medicinal drinking, prescribed to such an extent by medical men, is founded on error. A condensed account of these facts will be found in that storehouse of precious truth, the works of Dr. F. R. Lees, of Leeds. (See Vol. III., page 55, etc.) Had true science alone guided the profession, the system of alcoholic prescription still pursued would have been abandoned long ago.

Three Frenchmen have, however, added recently to the general fund of facts bearing on the point, the results of most important and indisputable discoveries. By means of a *red* liquid, which any vapor containing alcohol changes to *green*, they have been able to establish the truth that this drug is neither destroyed in any way, nor changed, in the human body. For as many as fourteen hours after it had been taken into the stomach, they could detect it passing off from the living system *unaltered*. Their experiments are of such a character, that the whole chemical world is compelled to bow to their conclusions. The very highest authorities have done so, and acknowledged that their former ideas as to the assimilation of alcohol in the body were wrong. It is not necessary for me here to detail these experiments. It is of more importance to seek to impress the reader's mind with the momentous lessons which they teach on our general subject. Let us take the light furnished us in the fact that alcohol does not, in any way, enter into the composition of the living frame, and look back and around on medical practice as that is affected by it.

Alcoholic liquors have been, and are still, used largely as food, or "support," for human beings. At an enormous expense of the best grain, and the true food of man in other forms, that must all be destroyed ere the alcoholic compound can be produced in sufficient quantity, our fellow-creatures are provided with so-called *nourishment*, of which this is the specific element. For generations, alcoholic liquor has been regarded, and it is now regarded, by multitudes, as an essential part of tolerable human living. The most gigantic manufactories, the most gorgeous places of sale, the most lucrative of trades, are all dependent for their very existence on the idea in the public mind, that this species of drink is the best of nourishment for the body of man. How perfect is the delusion when all this has been, and is, in spite of the demonstrable, and now demonstrated truth, that this spirit never assimilates with the animal system at all! So much for the healthy public.

Then the medical man pays his busy round of visits; his manner is

generally mysterious, he looks, examines, seems to meditate, prescribes; but, above all, *orders* alcoholic drink, as he says to his patient, "You *must* have *nourishment*." Nothing but a generous doct will do, and "generosity" in "doct" means "drink!" All this goes on daily in defiance of the inexorable truth that this drink, instead of nourishing the body, after lowering the life process, passes through it unchanged!! The whole thing is a most serious drawback on the honor of the profession. A case came under our notice lately, in which a delicate lady, scarcely like the possibility of life, had to swallow some £20 worth of liquor in a few months, by medical order! The common advice, in a case of extremity, and when the patient's strength is all but gone, is, "*Pour in brandy!*" All this, and more, by far, than tongue can tell or pen describe, is done by a profession who have a legal monopoly of medical advice and treatment, on the ground of their scientific attainments! And yet it is all in the face of the truth that the liquor thus employed for support can not be assimilated by the animal frame, and most surely depresses the life process wherever it is used! Witness the fatal evidence of this truth in Dr. Gairdner's statistics, to which we have already referred.


The idea of "*fuel*" for the blood, that has been so extensively relied on of late years by men prescribing alcoholic liquors, is shown, by this discovery to be just as false as that of *nourishment*. Liebig, the great German chemist, *conjectured* that alcohol gave up its carbon on entering into the current of the blood, and by thus combining with the oxygen already there, or received in the breath, he imagined it gave *heat*, and increased life action in the body. This mere conjecture was taken up by almost the whole world of medical men as a perfect explanation of alcoholic prescription, and the experience arising from it. The fancy of the practitioner could see, as with a second sight, the brandy when poured into the half-dead stomach, rushing to the blood vessels, and proving the very stuff of life by a wonderful chemical combination. The irresistible experiments of the Frenchmen have now put the fact beyond all doubt, that alcohol has no such combination at all. Yet the system of practice, proceeding on the exploded theory, is not abandoned. So far as my own observation goes, there is really no change in the "orderings" of medical men. "Porter," or " stout," or "pale ale," or "port wine," or "sherry, two glasses a day," or even "whisky," or "gin," or "brandy," all for "support," are as freely and authoritatively insisted on as ever. Even *threats* by medical men against those in their power are employed to compel the use of that which the poorest science proves to be only hurtful to man, whether he is in weakness or in strength. When any thing in the shape of scientific reason was, till recently, asked for this practice, the notion of "*fuel*" for the blood was confidently advanced. That is gone, but the evil practice, in favor of which it was advanced, remains.

One high authority, in view of the total failure of chemical theory to support the use of this drug, advances the very remarkable idea of "*expulsion*." By this it is no doubt meant that patients *have* been supported and saved by the use of alcoholic liquor. It reminds us of a man, whom we told that this liquor did not warm but cooled, and he exclaimed,

"Why, it warms me from the crown of the head to the soles of my feet." Such was his "experience"—that is, such was his *delusive feeling*. On this and similar *feelings*, on the part of their patients, medical men, high in place and power, are prepared to set aside the most indisputable conclusions of science. It can not for a moment be held that the facts of true experience are in this, or in any thing, contrary to those of true chemistry. Take what has been experienced in the hottest and also in the coldest climes, as well as the most trying and least trying situations in which men can be placed, and all who have given a tithe of the attention to the subject which it merits know, and that beyond all doubt, that experience is, as might be expected, in perfect accordance with true science, and the facts which that science has made the common property of mankind.

Some of the most striking instances of medical practice throw strong light on what is relied on as experience in this matter of liquor. I have seen, for example, a man who, in his last illness, by medical authority of the highest order, was kept for three weeks constantly in a state of visible inebriation, in order to his "support." At the end of that time, the supply of alcohol was ordered to be entirely withdrawn. The only thing apparent was, that the man regained his sober senses, and visibly improved in comfort of body and mind, though he was under a fatal disease. What part of the "experience" upholding the use of liquor would such a case be called? Most people know that the pain caused by a diseased tooth is often allayed by that which *deadens* or *destroys* the nerve of sensation in the part affected. Just so may pain, in other parts of the body, be allayed by the deadening or destructive agency of alcohol applied to the nerves that are engaged in giving intimation of a state of disorder. It should never be forgotten, however, that such effects of a relieving nature as are thus produced are *not cures*. They are simply partial poisonings that silence the witness of disease, but leave the malady the same. Cases in which patients *will* have alcohol if it can be got for them prove nothing but what is in perfect accordance with the facts to which we are calling attention. Cases of an identical nature, in which the same relief is given without alcohol, and in which the patients seek simply hot water, as the others seek brandy, must be taken into account, if any satisfactory conclusion is to be reached. When this is really done, all experience harmonizes with the revelations of science. Where the *liking* for liquor has been established, and nothing will please but liquor, the case is simply one of diseased habit, similar to that of any other lover of drink. It only shows, in one of its worst features, the misleading nature of the drug. This can never be placed over against the teachings of such facts as those to which attention is now being everywhere so earnestly drawn. The loved excitement and care-dispelling influence that plays such a part in all experiences arising from alcohol are only elements of the delusion of medicinal as of all other drinking that involves the use of the delusive poison.

IS ALCOHOL FORCE?

 R. CARPENTER, one of the ablest and best of our temperance men, has, according to our thinking, shorn his locks, and succumbed to the enemy, so far as to have recourse to alcoholic help himself, and publicly to defend medicinal drinking. He can not, in the face of what is now beyond all controversy, hold that the liquor is "food," or "fuel," and so he says it is "*force*." The application of the whip or the spur to the flanks of a jaded hack is not "food," nor is it "fuel," but, probably in Dr Carpenter's mind, it may be "*force*." If he thinks it is, we we must form a much lower estimate of his *head* than we should have been disposed to entertain, however highly we must still value his heart. And yet he would not be so seriously mistaken in the matter of the whip or spur applied to the horse, even did he regard the application as that of *force*, as he is in believing that the introduction of alcohol into the body of man is the introduction of force there.

In the case of a lazy or weary animal, to which whip or spur is applied, the effect of force, existing and exerted somewhere, is generally evident. The cartwheel, for example, is fast in the rut. Force alone can take it out. The whip is applied, and forthwith the wheel is brought onward, as is desired. That is a result which *force alone* can produce. The result is clear, and its cause is indisputable. The question, however, remains—*where* did the latent force exist which really brought the wheel out of the rut? Dr Carpenter will surely not say that it lay in the thong or shaft of the whip, nor yet that it lay in the arm that applied that instrument of pain. Neither can he imagine that it lay in the pain which was inflicted. The force was clearly in the sinews, or, if you will, in the nerve of the animal. Pain called it forth: but could not have done so if it had not been there. To speak of the stimulus of the lash as "*force*," unless very loosely, is simply to say what is not true, and to say it so as to mislead the mind on an all-important question.

But is the case of the exhausted and seriously enfeebled human frame, into which alcohol is introduced, really analogous to that of the animal to which the whip or spur is applied? In one momentous feature at least it is different. That which is wanting in the case of the horse is not strength, but the will to put it forth. In Dr Carpenter's own case, for example, that which is lacking is not the will but the strength. The two cases are very different indeed. The alcohol is confessedly not food, not fuel: not an increase of any element whatever in the body, for it passes from that body as it enters it, unchanged. It is assimilated to no part of the constitution of man, any more than the whip or the spur is to the constitution of the horse. It is imagined that it acts on the nervous system somewhat as the whip acts on the nerves of the animal, though that may be doubted. But that is not the thing required in a case of enfeebled health. At the utmost that would be but an unnatural drawing on strength, or latent force, already drawn upon too much, and so the theory breaks down.

This view of our subject should be carefully and earnestly considered by those who give alcoholic liquor to enfeebled patients. If the weakness be

only imaginary, and a slothful habit rather than true weakness has taken hold of the person to be experimented on, it may be but a temporary evil to give that which causes a delusive feeling of excited vigor. But if the case is one of true weakness, and the sinking strength is really all but gone, it is a serious matter indeed to give that which diminishes, but can not possibly increase, the all but exhausted fund of vital power. A host of human ailments are imaginary only; but they are not all so. And the truly careful will be loath to risk what so manifestly may extinguish the last feeble spark of life in any case whatever.

But there is a still more forcibly fatal objection to Dr. Carpenter's theory than that we have noticed. In the case of the horse and the cart-wheel in the rut, there is a result which tells that force has been called forth, from what quarter soever it has come. In the case of alcohol, in its effect on the body, and its life process, the result is such as indicates a lessening of true vital force, and not its increase. The only force called forth is that needed to expel the drug. Every used-up product of the human frame is in reality *lessened* by the introduction of alcohol into the stomach. How can this indicate force? The vital heat, which is the great result of the most important process of the living system, is *lessened* in amount by the introduction of the same agent. How can this harmonize with the existence or calling forth of *force* by means of alcoholic liquor? The wheel is not only not brought out of the rut—it is sunk deeper into it by the application of this so called stimulant. The theory has not a leg to stand upon. The whole system, with all the theories ever invented, or to be invented, crumbles at the touch of real science, or true reasoning.

There is undoubtedly something like a *stir* in the animal system on the introduction of this mischievous drug. So have we seen an extraordinary *stir* on the application of the whip, when the wheel only sank deeper into the soil. The *stir* was much greater, too, then, than when the wheel was brought out and the cart taken along. In that case, there was disturbance without added force. There was, in fact, a demonstration that such *stimulus is not force*. The latent power was not in the beast, and so neither whip nor spur could bring it out of him. We are strongly disposed to think that this fruitless excitement of the helpless animal is at least nearer the truth, in the case of alcoholic liquors, than Dr. C.'s theory of that drug being really "*force*." And yet there is something, we conjecture, which is nearer the truth still.

Alcoholic liquor causes the *feeling* of increased heat, without the reality. It causes, indeed, the feeling of increased heat at the very time when the thermometer indicates that heat is lessened in the body. How is this accounted for? The feeling is evidently one of those mysterious results produced in the nervous system alone. It is known on all hands that alcohol has a peculiar affinity for the nervous matter of the body; that is, though it does not combine with that matter on being introduced into the body, it flies to the nervous centres, producing an instantaneous impression on these, and from these on the whole nervous system. Its effects on the man are clearly effects on the nerves and nervous centres chiefly if not exclusively. What is the true nature of these effects? Is it really an in-

crease or a diminution of what may be called the *tone* of the system? Is it the same effect as that of moderate heat: or is it similar to that of what we know as extreme cold? I make the inquiry, in relation to the nervous system alone, as that on which the alcohol tests. The application of cold water, or of cold air to the palm of the hand, where so innumerable a multitude of nerves reach the surface, produce a state of those nerves, we think that may illustrate this part of our inquiry. The lessening of heat indicated by the thermometer compels us to seek for some such explanation.

If with a warm hand, I grasp the warm hand of another, I feel as if his hand were only at a moderate temperature. If I grasp the same hand at the same temperature, while mine is *cold*, I feel as if his hand were exceedingly warm. May it not be on account of the sudden privation of life tone by the action of alcohol on the nerves, that the surrounding parts and juices are *felt* as if they were suddenly heated on the introduction of the nerve-affecting compound? There is, in all cases where life remains in perceptible force previously, a hastening of action in every organ by which alcohol may be expelled from the body. *This* might account for increased heat, as the result of such hastened action, but it is not increased but lessened heat coupled with the *feeling* of its increase, for which the careful thinker requires an explanation. This is accounted for in the way I have indicated.

Where, then, is the evidence of Dr. Carpenter's idea of *force* as communicated to the enfeebled system by port wine, or any other preparation of alcohol? Every fact is against it. The *feelings* produced can be accounted for without it. The lessened life in the nervous system, accounting for the stronger impressions produced by lessened powers fitted to produce them, seems to compel us to add his theory to the mass of notions that so forcibly manifest the mockery of wine. Most signally does this privation of nervous life, so strikingly indicated when the dose of alcohol is large, demonstrate the falseness of the practice in which alcohol is so freely ordered as support to the frail and enfeebled human frame.

DELUSIVE FEELINGS.

MAN is distinguished from the lower animals, in no small degree, by his faculty of *reason*. In the selection of food to eat, or of liquid to drink, he is not guided by instinct as inferior creatures are. He is provided with a higher capacity, and is expected to use it earnestly and rightly. This power of reason implies that he is able to ascertain those facts that are related to his best interests, and also, that he is able to infer truth correctly from such facts when ascertained. He is not left to conclude that a particular article is wholesome merely because it *tastes agreeably*, or produces an agreeable *feeling* when it is taken as food or drink into his mouth or stomach. He is capable of ascertaining other facts besides those of mere feeling or temporary agreeableness, and of reason-

ing correctly from all the facts which bear upon the particular case in hand. Man is capable also of teaching his fellow-men those facts from which he may thus reason safely and truly, so as to secure the greatest good, without suffering the evil to which he would otherwise be exposed.

This is one of those fields in which it is possible for mankind to rise or fall in the scale of true happiness and progress. In proportion as a people consent to lay aside their reason, or to accept unsifted matters of apparent fact, and to act on mere "likings," in the same proportion they inevitably descend in the scale. So in proportion as they summon to action the higher powers of their nature, and act on truth and reason, making all mere "*liking*" subordinate, in the same proportion they rise in the exercise and enjoyment of their true nature. When, for example, a man has no better reason for the use of any thing than merely that he "*likes*" it, and that, too, when he knows some strong reasons against its use, he, however unconsciously, lowers himself by such use. Even if one has no better reason for such use than that he *feels* the better for it, when other and stronger reasons show that the feeling is a delusive one, he lowers himself by following his feelings instead of acting on his superior reason. It is this truth that underlies the feeling of shame or semi-self-condemnation that rises in superior minds when following their likings in the use of doubtful or hurtful articles. The fact of following an inferior desire, and so far abdicating the position of intelligence, can not exist without a greater or less degree of such a feeling.

The truth that *feelings deceive* men will not be doubted by any one who knows any thing of human experience. In connection with all nervous affections, this is beyond dispute. Some few striking cases may be alluded to. An officer in the time of the Crimean war had the ground shot from beneath his feet by a cannon-ball. The effect on the nerves of his feet was such that he fell, and lay under the full conviction that his feet had been both taken off, though they were not hurt in any way. It is said that when another officer came up to him and asked why he was lying there, he told him, with the greatest anxiety, that his feet had been shot off! His *feeling* was to that effect! In cases of what is called *hypochondria*, delusive feelings from the state of the nervous system are often of the most ludicrous character. It is recorded of a man that he firmly and constantly believed himself to be made of glass, and was in the greatest terror lest he should be broken. A lady, of whose case we have heard, firmly believed she was a teapot, and insisted on doing duty at the fireside in the way of masking her contents. Another as firmly believed herself a "hen," and got a nest of eggs to hatch, by way of a practical carrying out of her delusion. These, of course, are extreme cases of nervous feeling of a delusive nature, but they do not differ in kind from that which makes a man believe that he is *heated* by alcohol taken in liquor, at the time the thermometer infallibly indicates his having become colder. They teach with a power in proportion to their extravagance how necessary it is for man to be guided by other information than that which is supplied by his feelings alone. He may laugh at the hypochondriac, and yet be himself misled in a far more ruinous way than the object of his ignorant merriment.

To assail this matter of *feeling* in the strong drink question ever has been, and will continue to the end to be, the great and most difficult duty of the true temperance reformer. The battle is, indeed, throughout, in a great measure, one between delusive "experience" and stern truth. No one defends drunkenness. No one even defends drinking, except within comparatively narrow limits. Multitudes of even teetotalers defend it, in so far as men, women, and children "*feel the better for it.*" Not one of these will defend it for a moment after they are thoroughly convinced that this feeling of betterness is a delusion.

To this statement there may perhaps appear to be a striking exception. Alcoholic drink is given where no hope of recovery is entertained. It is given even when it is not imagined that it can in any degree promote recovery. It is given and taken when it is not believed to be capable of lengthening life. But would it be given with the distinct knowledge that it must *shorten life*? Would even comfort be purchased at the expense of one hour of prolonged existence in this world? If it would, then, on the same principle, there could be given much more honest poisons than alcohol. And yet if (as we have seen) the vital heat is lowered, and the nervous power depressed by the administration, there is little room for doubt that life must be shortened, especially in the case of those who are already excessively weakened when it is used.

One all-important question calls for an answer here. Is there any thing else that can give relief in fatal illness such as that given by alcohol? I would answer this by stating some little of what I have myself witnessed. Take two cases of fatal asthma. I have seen one person passing from this life through the sore ordeal of this disease, constantly relieved by portions of the liquor in question. I have seen another passing through the same, relieved by sips of hot water. The relief in the case in which the water was used was not only as visible as in that of the alcohol, but with the water there was an entire absence of the deplorable restlessness that always follows the use of the fiery drug so often used. No one carefully comparing the two cases could help preferring that in which heat was really introduced in the water, to that in which the false feeling of it was produced by the other liquor. I have seen another case—one of fatal consumption. The prescription of the medical man was "wine," given often, or "whisky" if preferred. Small quantities of wine were used. The patient was *miserable*. By other advice the alcohol was discontinued, and the juice of an orange, mixed with a little sugar and water, given instead. The relief called forth blessings on the head of him who prescribed the change. We should think the best of all "wines" for the invalid would be that which God himself has given in the juice of the grape, before it has been destroyed in its refreshing qualities by the process that produces alcohol. As it comes fresh from the vine, this liquor contains some thirty per cent of nourishment for man, and is otherwise every way fitted to support and refresh the body. In full preservation, though kept for years, with all its qualities of excellence, it can be obtained just as easily as any real grape wine, and certainly ought to be used in preference to the fiery and mischievous compounds that pass under the name. Many outward,

as well as simple inward, remedies take the place of alcohol in the hands of the enlightened practitioner—giving far, far more comfort, and that with real help to life. All true hydropathic physicians eschew alcohol entirely, and yet, in hundreds of cases, deliver the patients who have been treated with it both from misery and death.

There is one great difficulty to be faced in the cases of those who have got more or less into the habit of using liquor, and who call for it in their hours of distress. What are friends or relatives to do then? It is perhaps difficult to say; but the principle of intelligent decision is not so far to seek as many may suppose. If any one asks to be put out of pain by being put at once to death, we do not think that many would advocate our doing as he desires. We should try probably in some other way to give relief, or if we could not, we should endeavor to raise his sinking courage to bear patiently till the great Giver of life is pleased to take it away. Few hands would administer a draught known to have the effect of relieving pain or languor at the cost of life.

With one thought I may now close. We must lay out, on one hand, the dark and dreadful fruits of the liquor system. On the other, we must look at the hollow character of the benefits it confers. In view of both, the Christian patriot will make up his mind, and we think he will not waver much in the resolution, with divine help, to have done absolutely with the abominable and ruinous instrument of so much of the calamity that society has to deplore.

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